

**DOD CHLORDANE SOIL GUIDANCE IN HAWAII**  
**19 DEC 2006**

This guidance applies to construction projects on military installations in Hawaii that have chlordane-contaminated soil as a result of normal application of chlordane for its intended use. Environmental cleanups are not subject to this guidance. Although not required by law, the Department of Defense (DoD) in working with the State of Hawaii Department of Health and desires to provide a safe environment for service members, civilians and the public.

Soil should be handled in accordance with either paragraph (a) or (b) (not both) as follows:

- a. Soil with technical chlordane (includes heptachlor and heptachlor epoxide) concentrations equal to or less than that listed in the below table may remain on site without restrictions where other pesticides are not suspected to be present. A vegetative cover, though not required, should be considered.

Land Use	Maximum Concentration (ppm)	Assumptions
Residential	25	10 <sup>-5</sup> risk, 6 years exposure
Industrial	65	10 <sup>-5</sup> risk, 30 years exposure

- b. Soil sampled for chlordane only having concentrations equal to or less than that listed in the below table may remain on site without restrictions at sites where other pesticides are suspected to be present. A vegetative cover, though not required, should be considered.

Land Use	Maximum Concentration (ppm)	Assumptions
Residential	10	10 <sup>-5</sup> risk, 6 years exposure
Industrial	36	10 <sup>-5</sup> risk, 30 years exposure

- c. Soil with chlordane concentrations exceeding paragraph (a) or (b), should be placed under paved areas, covered with a minimum of 6 inches of clean fill, or transported off-site for disposal. Paved areas include concrete and asphalt surfaces, such as, building foundations, roadways, driveways, and basketball and tennis courts. Soil disposed of off-site should be sampled and tested to ensure compliance with State of Hawaii Department of Health disposal facility guidelines and permit requirements.

- d. Soil blending, the mixing of materials with chlordane concentrations in excess and below that of paragraph (a) or (b), with the intent of reducing the mixture to acceptable levels should be authorized.

Representative sampling should be performed to determine the extent of chlordane present on site. Acceptable methods for sampling may include biased-composite and multi-incremental sampling.

Soil removed during maintenance of the housing areas should be backfilled without testing provided the following guidelines are met:

- a. Soil should be redeposited in the same area and, as much as possible, at the same depth that it was originally encountered.
- b. The top 6 inches of the excavation should be filled with unrestricted use or clean material equal to or less than the chlordane concentrations presented in the above table.

Future re-grading activities at the site should follow the guidelines outlined in this memo.

DoD reserves the right to perform a site-specific risk assessment to determine site-specific action levels if site conditions warrant.